

System and method for distributed network address translation in a network telephony system. A first network phone with a first protocol, requests at least one locally unique port from a first network device. The first network phone and the first network device are located on a first network. The first network phone receives, with the first protocol, the at least one locally unique port from the first network device. At least one default or ephemeral port on the first network phone is replaced with the at least one locally unique port. A combination network address is created for the first network phone with the at least one locally unique port and a common external network address, thereby identifying the first network phone for communications with a second network device located on a second network. The second network device may, for example, be a second network phone. In a preferred embodiment, the first protocol is a Port Allocation Protocol, such as the Realm Specific Internet Protocol.